

AMENDMENTS TO THE SPECIFICATION

Please insert the following paragraphs between paragraphs [0015] and [0016] in the specification as published:

[0015A] FIG. 3A shows a perspective view of a threaded mouth of another gas inlet pipe in accordance with the present invention.

[0015B] FIG. 3B shows a perspective view of the mouth of still another gas inlet pipe having a screen, turbulence grid or perforated diaphragm in accordance with the present invention.

Please amend paragraphs [0017], [0018] and [0022] in the specification as published, as follows:

[0017] Referring firstly to Fig. 1, Fig. 1 shows a fluidised bed reactor having a pressure-resistant casing 1, a fluidised bed 4 and, located therein, a device for introducing gas into the reactor. The gas introduction device comprises a plurality of gas inlet pipes 3, which are arranged above the fluidised bed 4, for introducing gas currents into the fluidised bed 4 from above and a plurality of gas inlet pipes 2, which are arranged underneath the fluidised bed 4, for introducing gas currents into the fluidised bed 4 from below. As shown in diagrammatic form in the two enlarged views of the gas inlet pipes arranged above and underneath the fluidised bed 4, in the case of the gas inlet pipes customary in the prior art a substantially parabolic velocity profile (5-Wm) of the gas current becomes established over the cross-sectional area of the pipe. The reactor shown in FIG. 1 has a diameter of 28 cm and a height of 2.3 m.

[0018] Referring now to Fig. 2, Fig. 2 shows a fluidised bed reactor having gas inlet pipes for introducing gas currents in accordance with the present invention, which differs from the reactor shown in Fig. 1 in that the gas inlet pipes of the device for introducing gas currents of Fig. 2 are provided, in accordance with the invention, with a narrowing of the pipe lumen for swirling the gas current. Preferably, the narrowing has at least one edge 7. The gas inlet pipes 2, 3 have for that purpose an annular bead 6 which is arranged around the internal circumference at their outlet-side end. As shown in diagrammatic form in the two enlarged views of the gas inlet pipes arranged above and underneath the fluidised bed 4, as a result of the annular bead 6 the parabolic velocity profile known for the pipes in the prior art is flattened off in favour of an increase in the gas current velocity in the vicinity of the margin of the pipe. In particular, the velocity profile (5, ~~Wm~~) of the gas current emerging from a gas inlet pipe is substantially constant over the cross-section of the gas inlet pipe. The average flow velocity W_m is also shown with respect to the velocity profile 5.

[0022] In the fluidised bed reactor according to the invention of FIG. 2, the reactants, which are heated to 150° C., are introduced in gaseous form, a mixture of 63 Nm³/h of hydrogen chloride and 17 Nm³/h of oxygen flowing into the catalyst fluidised bed 4 through the gas inlet pipes 3 arranged above the fluidised bed 4. A mixture of 32 Nm³/h of ethene and 60 Nm³/h of circulating gas flows into the catalyst fluidised bed 4 from below through the gas inlet pipes 2 at a temperature of 150° C. and a pressure of 4.7 bar. The average flow velocity W_m is 1.3 m/s in the gas inlet pipes 2 and 1.0 m/s in the gas inlet pipes 3.

Please insert the following paragraphs after paragraph [0025] of the specification as published:

[0026] FIG. 3A shows a perspective view of another gas inlet pipe 3 having threads 8 to help accomplish the desired gas swirling. FIG. 3B shows a perspective view of still another gas inlet pipe 3 having another feature 9 for gas swirling. The feature 9 secures within the gas inlet pipe 3. The feature 9 may be a screen, turbulence grid or perforated diaphragm, which acts to create a gas swirling effect.

[0027] While the invention has been described with respect to preferred embodiments, those skilled in the art will readily appreciate that various changes and/or modifications can be made to the invention without departing from the spirit or scope of the invention as defined by the claims.